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EXAMINER

CHANG, VICTOR S

ART UNIT

PAPER NUMBER

1771

DATE MAILED: 06/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/008,194

Applicant(s)

BUSSEUIL ET AL.

Examiner

Victor S Chang

Art Unit

1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 0808.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, lines 4-6, the recitation "one extension adapted for opposing and which approaching" is vague, indefinite and confusing. The Examiner suggests to change "adapted for opposing and which approaching" to --, the end of said extension is formed adjacent to--.

In claim 1, line 8, delete the second "one".

Also, in claim 1, lines 8-9, the recitation "against at least one of the extensions such that extensions locally guide the expansion of the expandable material" appears to be vague, indefinite and confusing as to the direction the expandable material is being guided to.

In claim 3, line 3, the Examiner suggests to change "extremity" to more commonly used --outer surfaces--. Also, at line 4, insert --the surfaces-- after "and".

For claim 4, the Examiner suggests re-write the claim with Markush format.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1 and 2 are rejected under 35 U.S.C. 102(e) as being anticipated by Hopton et al. (US 6253524).

Hopton's invention is directed to a reinforced structural member includes a structural member and a reinforcing member, the reinforcing member being received within a cavity of the structural member and bonded thereto by thermally expansible foaming structural reinforcing material (Abstract). Hopton teaches in Figs. 1 and 3 the cross section view of the reinforcing member 20, which broadly includes a carrier 28, thermally expansible foaming structural reinforcing material 30, and at least one directional foaming shelf 34. The reinforcing material elements 36 and 38 are thereby held in positions sufficiently proximate the structural member 22 to permit the reinforcing material to foam, expand and bond to the carrier 28, respective directional foaming shelves 40 and 42, and structural member 22 (column 3, line 64 to column 4, line 8).

Claims lack novelty.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3-20 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Hopton et al. (US 6253524).

The teachings of Hopton are again relied upon as set forth above.

For claims 3 and 8, although Hopton is silent about the clearance between the outer surfaces of the reinforcing member and the inner surfaces of the hollow structural member, it is believed that a suitable clearance is either inherently disclosed by Hopton, or an obvious optimization to one of ordinary skill in the art, motivated by the desire to optimize the bonding between the elements.

For claim 4, although Hopton lacks an express teaching of forming the reinforcing member by injection molded plastic with a foam core, the Examiner notes that the aforementioned reinforcing member is well known art, as evidenced by the state of the art Harrison et al. (US 6451231) which teaches a plastic stiffening part with a foam core formed by injection molding (column 5, lines 55-59). As such, it is believed that a injection molded plastic part with a foam core is either inherently disclosed by Hopton, or an obvious selection one of ordinary skill in the art, motivated by the desire to reduce the weight of the reinforcing member.

For claims 5, 19 and 20, the Examiner notes that Hopton's directional foaming shelf 34 inherently encompasses structural elements such as ribs, or at most an

obvious modification to one skilled in the art, motivated by the desire to form extensions or walls to direct or restrict the foaming direction. Further, Hopton clearly shows in Fig 1 that the expandable material is placed between the walls (or ribs), and in Fig 8, that a series of pairs of walls (or ribs) are intermittently provided.

For claims 6 and 7, Hopton expressly teaches that the walls of the directional foaming shelf can be adjusted, and the walls of the lower directional foaming shelf support the reinforcing member (column 5, lines 43-50).

For claims 9-11, Hopton expressly teaches that the reinforcing member can be formed from nylon, i.e., a polyamide. Further, the Examiner notes that including glass or carbon fiber in a reinforcing plastic is well known art, as evidenced by the state of the art Torigoe et al. (US 5598610) which teaches that carbon fiber or glass fiber can be added to reinforce a injected molded polyamide (column 8, lines 45-63). As such, it is believed that the use of a filled polyamide to form the reinforcing member is either inherently disclosed by Hopton, or an obvious modification to one skilled in the art, motivated by the desire to modify the elastic modulus of the reinforcing member.

For claims 12-13 and 15-16, Hopton expressly teaches that a preferred composition of the thermally expandable foaming structural reinforcing material 30 contains from about 30-45% by weight of a bisphenol A-based liquid epoxy resin and from about 10-20% by weight glass microspheres (Scotchlite S60); from about 0.1-5% by weight of a blowing agent (column 4, lines 26-41). It should be noted that epoxy resin is believed to be inherently thermosetting. Further, Hopton teaches that admitted prior art shows that the reinforcing member is adhesively attached to the metal

structural parts of an automobile by thermally expandable material (cover page, other publications).

With respect to the product-by-process claims 14, the method limitation has not been shown on the record to produce a patentably distinct article, as such the formed articles are rendered *prima facie* obvious.

For claim 17, although Hopton lacks an express teaching that the expandable material is applied to at least a portion of the surfaces of the rigid reinforcing member that will be adjacent to two non-parallel surfaces of the interior surface of the hollow structural member, it is noted that Applicants have admitted in Fig. 2B that the aforementioned element is known prior art.

For claim 18, although Hopton lacks an express teaching that the expandable material is applied over part of each of the top and bottom and the sides of the reinforcing member, it is believed that placing the expandable material suitably on the surfaces, including all four sides, of the reinforcing member is known art, as evidenced by the state of [†]the art Czaplicki (US 6358584, Fig. 1). As such, it would have been obvious to one of ordinary skill in the art to modify Hopton's reinforcing member to place the reinforcing material at all the surfaces, motivated by the desire to secure the reinforcing member to all the surfaces of the cavity.

Claims 21-32 essentially contain the same claimed elements of claims 1-20, as such they are also rejected for the reasons as set forth above.

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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor S Chang whose telephone number is 703-605-4296. The examiner can normally be reached on 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel H Morris can be reached on 703-308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

VSC
June 23, 2003

DANIEL ZIRKER
PRIMARY EXAMINER
GROUP 1900-
1700

Daniel Zinker